

## Trust as an aspect of organisational culture: its effects on knowledge sharing in virtual communities

Article (Published Version)

Usoro, Abel and Khan, Imran U (2011) Trust as an aspect of organisational culture: its effects on knowledge sharing in virtual communities. *International Journal of Human Capital and Information Technology Professionals*, 2 (1). pp. 1-17. ISSN 1947-3478

This version is available from Sussex Research Online: <http://sro.sussex.ac.uk/id/eprint/92283/>

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher's version. Please see the URL above for details on accessing the published version.

### **Copyright and reuse:**

Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

# Trust as an Aspect of Organisational Culture: It's Effects on Knowledge Sharing in Virtual Communities

*Abel Usoro, University of the West of Scotland, UK*

*Imran U Khan, University of the West of Scotland, UK*

---

## ABSTRACT

*Knowledge sharing is of much interest to both practitioners and researchers because of its potential to quicken learning, enhance innovation, reduce costs, and place organisations on a competitive edge. A principal tool for knowledge sharing has been identified by researchers to be virtual communities in which research collaboration and other knowledge sharing activities easily take place. Some key factors examined in literature as influencing knowledge sharing are technological, economic, and cultural. This paper concentrates on organisation culture with specific focus on trust as its component. While trust has been researched in other contexts, it has not been researched as an organisational cultural component that could affect knowledge sharing in virtual communities. This gap in knowledge is what this paper aims to fill. A conceptual framework is developed to express the relationship between trust components and knowledge sharing in virtual communities. The framework will be verified in future empirical research; however, possible implications of the research to research and practice are presented.*

*Keywords:* Conceptual Framework, Knowledge Sharing, Organisational Culture, Trust, Virtual Communities

---

## INTRODUCTION

A real challenge for organisations at the beginning of the millennium was “....how to harness the intelligence and spirit of people at all levels of organisation to continually build and share knowledge” (Senge, 1997, p. 32). Since then researchers have shown that knowledge sharing provides business with competitive advantage (Reid, 2003), enhances innovative performance

and reduces redundant learning efforts (Calantone, Cavusgil, & Zhao, 2002; Scarbrough, 2001). Most research has discussed technical and economic aspects of knowledge sharing while very limited attention is given to culture specific factors that affect knowledge sharing. Usoro et al. (2006) classified culture that affects knowledge sharing into organisational and societal categories. They also noted that research in culture is predominantly either value-based or work-practice based and this paper takes the work-practice approach.

DOI: 10.4018/jhcitp.2011010101

Organisation culture has many components and trust is one of them. Trust itself can be decomposed. For example, McAllister (1995) categorised trust into affective and cognitive categories. The effect of trust has been researched in different organisational aspects like coordination and control at interpersonal and organisational levels in the works of Shapiro (1987, 1990) and Zucher (1986). At organisational level it can be differently analysed, for example, trust in teams, trust of subordinates to leaders or managers and trust between organisations (Pesamaa & Hari, 2007; Politis, 2003; Selness & Sallis, 2003; Grayson & Ambler, 1999). Nonetheless, Zaheer, Bill, and Vincenzo (1998, p. 141) noted that “considerable ambiguity is evident in the literature about the precise role of trust as it operates at different levels of analysis and its influence on performance.”

Thus, this research is one of the efforts at addressing the ambiguity on the role of trust. This research examines trust from the point of view of being a subset of organisational culture, and investigates how it affects knowledge sharing. The rest of this paper will present (a) research problem; (b) existing research; (c) review of literature; (d) IT professionals in virtual communities and knowledge sharing; (e) levels of trust in organisation; (f) dimensions of trust; (g) research model (h) implications; and (i) limitations and future work.

## RESEARCH PROBLEM

This research is part of a large scale study on the ‘effects of organisational culture on knowledge sharing in virtual communities’. The current paper focuses only on trust factor of organisational culture. To determine the effect of trust on knowledge sharing, the level of trust in an organisation has to be first established and this is investigated in this paper.

The research problem can be illustrated by Figure 1 below. The example supposes a virtual community of three institutions: University of the West of Scotland (UWS), Glasgow University and Strathclyde University. Assuming

that the trust levels (TL) of two organisations are equal ( $TL_{UWS} = TL_{Glas}$ ), the question is whether the amount of knowledge they would share among themselves or with others will vary or be the same. On the other hand, assuming that the trust level of Strathclyde University (see Figure 1) is greater than that of UWS, does this mean that the former institution will be more inclined to share knowledge than the latter?

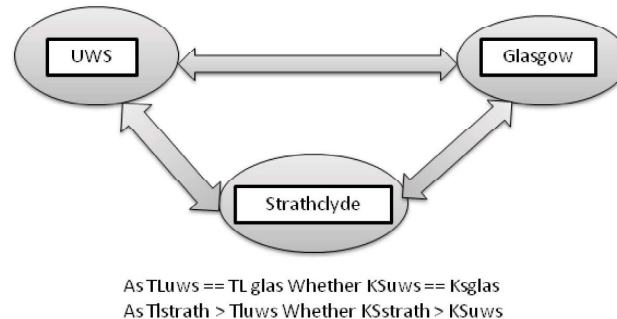
## EXISTING RESEARCH

Mayer, Davis, and Schoorman (1995, 2007) carried out a pioneer study that dimensioned trust into benevolence, integrity and competence or ability components and Sharratt and Usoro (2007) used this dimension to hypothesize relationships between them and knowledge sharing in virtual communities. They found that all three dimensions have positive relationships with knowledge sharing in virtual communities. This study is not repeating Sharratt and Usoro’s (2007) study but focuses on trust as an organisational cultural factor. The idea of trust existing as a component of organisational culture is supported by other studies (cf., Gupta & Govindarajan, 2000; Park, Ribiere, & Schultel., 2004).

Ismail, Nayla, and Yasmeen (2007) researched the relationship of organisational culture and knowledge sharing. They used the organisational cultural factors specified by Govindarajan and Gupta (2000). Apart from trust, they found information systems, communication, rewards and organisation structure to be positively related to knowledge sharing. One of the main limitations in their research was generalisation because they collected data only from Bahraini organisations. Ismail, Nayla, and Yasmeen’s (2007) discussion of relationships between trust and knowledge sharing was not in-depth and although it provides a good foundation for the current study, the context of the latter is virtual communities, making the research reported by this paper unique.

Figure 2 clearly draws the boundary to the research and puts trust and knowledge sharing in

Figure 1. Research problem example



the contexts of organisational culture and virtual communities, respectively. This paper, which focuses only on trust, is part of a larger scope of study into how organisational culture affects knowledge sharing in virtual communities.

## REVIEW OF LITERATURE

### Organisational Culture

Schein (1985) describes organisational culture as a set of implicit assumptions held by members of a group that determines how the group behaves and responds to its environment. It reflects member's experiences, their beliefs, attitudes and values.

Though organisational culture is described as implicit, the main approach to it is not only value based but also work-practice based (Usoro & Kuofie, 2006). Park et al. (2004) used value-based approach to study culture and dimensioned organisational culture into trust, sharing information freely and working closely together or making friends. However, he acknowledged that if the purpose of the research is to obtain a global perception then a questionnaire using practice-based approach would be adequate. The researchers who believe that value based approach is not the most appropriate approach argue that organisations show more differences in work practices than in values (Hofstede, 2001, p. 394). In a slight similarity to Park et al.'s (2004) view, Berg and Wilderom's (2004) consider values as important but at the same time

they consider values as sometimes a difficult factor to contain within an organisation: it is difficult to draw a boundary between values that belong to an organisation and those that are not. Thus, they preferred work-practice approach to studying organisational culture more so as the approach would highlight more differences between organisations. Their specified dimensions of culture are:

- Autonomy.
- External orientation.
- Interdepartmental coordination.
- Human resource content.
- Improvement orientation.

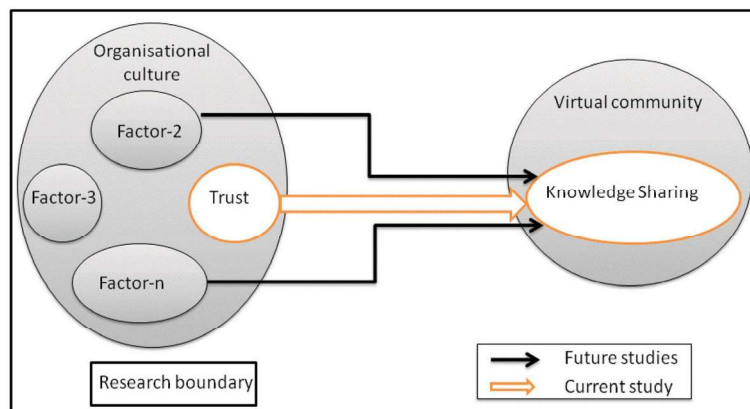
Identifying with these arguments, this research also adopts the practice based approach.

### Trust as a Concept

Trust has been studied in different disciplines like psychology like in psychology (Rotter, 1971, 1980; Elliott & Yannopoulou, 2007) and different contexts like in organisations (Bijlsma & Koopman, 2003), and virtual communities (Casalo, Flavian, & Guinaliu., 2008), to name only a few. Moreover, different approaches have been used. For example Bhattacharya, Devinney, and Pillutla (1998) used a highly statistical and mathematical approach to examine and define it. Nonetheless, they agree (after they examined various definitions and studies across different disciplines) that no matter the approach used or



Figure 2. Research boundary



the discipline of study, common characteristics are evident. These characteristics are that:

- Trust exists in an uncertain and risky environment;
- Trust reflects an aspect of predictability, that is, it is an expectancy;
- Trust's importance differs according to circumstance;
- Trust has some strength over time and circumstance;
- Trust exists in an environment of mutuality, that is, it is situation and person specific; and
- Trust is associated with positive (not negative) outcomes.

Rousseau et al. (1998) agreed with the idea of uncertainty (or vulnerability) in trust and expectancy which two characteristics, he considered, are common in most trust definitions.

Another scholar who agreed on expectancy characteristic is Rotter (1967, p. 651) with his definition of trust as "an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon."

The variability of importance and strength of trust accounts for each trust situation and the difference in consequence of trusting. For example, the reliability of public transport turning up in time in an African village may be scored

the strength of 50%, much lower than in a city as London. However, their importance may be the same as the consequence of a late bus in a relaxed African village but may be as severe as such lateness in London.

Bhattacharya et al.'s (1998) also include mutuality in the same way that trust is specific to individuals and situations. A religious clergy or politician can be very much trusted by their followers but even among the followers there are likely to be variations which are also based on the situations – a member of the laity may trust his or her clergy on certain pronouncements but not on others for instance. To emphasise the variability of trust, Barney and Hansen (1994) describes weak, semi-strong and strong forms of trust.

The last item on Bhattacharya et al.'s (1998) list is the positive nature of all trusts. Perhaps this is reflected in the idea of competence included in Mayer et al.'s (2007) definition of trust. The trustee is expected to be competent or able to perform.

Bhattacharya et al.'s (1998) synthesised characteristics appear comprehensive. However, it can be added that trust is not only between individuals but can have inanimate entities as a party or parties in the trust relationship. Rotter (1967, p. 651) in his definition above included the fact that an entity can be a group and not just an individual. An organisation can also

constitute an entity in a trust relationship as exemplified in the research literature (cf., Selleness & Sallis, 2003; Smith & Barclay, 1997; and Zaher, Bill, & Vincenzo, 1998).

Perhaps a way of viewing trust as a process and taking into consideration the foregoing discussion is Figure 3.

Using Figure 3, trust can be defined as the expectations that an entity (a trustor) has that another entity (a trustee) will fulfil promises, through proper actions using the trustor's knowledge and skills; and that the outcomes will be desirable to the trustor. Mutuality and variability of trust have to be noted as implicit in this definition. That variability and mutuality account for different trust relationships and makes measurements and comparative research, such as the one this paper proposes, possible.

### Trust in Organisational Culture

As has been indicated before, trust has been researched as a component of organisational culture. Thus, as shown in Figure 4, Gupta and Govindarajan (2000) include trust in their dimensions of organisational culture. More recently, Park et al. (2004) also positioned trust within organisational culture just as Tyler (2003) did in his research which indicated that the change in the nature of organisations increases the importance of trust within and between them. One of such changes is virtuality with the use of information systems to glue together separated entities of organisations. Trust need to exist within and between these entities for them to share knowledge and collaboratively progress.

In an organisation, trust can be noticed in different areas, for example, trust in teams, trust between colleagues and trust of subordinates towards managers. Trust benefits organisations in many ways, for example trust between managers and members reduces or even eliminates monitoring (Costa, Roe, & Taillieu, 2001). Trust works as a lubricant in a wide array of organisational processes (Bijlsma et al., 2003) and economic transactions by creating good relations between actors and saves the organisation monitoring costs (Creed & Miles, 1996; Pow-

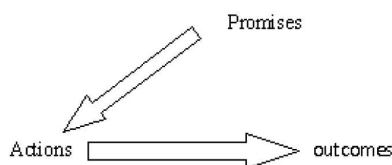
ell, 1990). It has been empirically proven that trust is positively related to team performance, team satisfaction and relationship commitment (Costa et al., 2001). Trust leads to acceptance of decisions (Tyler, 2003) and acceptance of influence (Tyler & Degoe, 1996). The foregoing discussion indicates that trust is a component of organisational culture and has great importance in organisations.

### Virtual Communities

Preece (2000) made the point that virtual communities are complex social systems enabled by complex sets of information technologies. Rheingold (1994), considered as one of the first to present the meaning of a virtual community, described it as a social aggregation that emerges after people using communication technologies (typically the Internet) have carried out enough discussions, with sufficient feelings, to form relationships. Scholars generally agree that members of virtual communities most often do not meet face to face but are connected by technology (Camison, Palacios, Garrigos, & Devece, 2009; Hsu, Ju, Yen, & Chang, 2007, p. 153) which removes the space and time barriers (Andersen, 2005).

The motivation is to gain social support and sense of belonging, to share or pursue a common interest which may be fantasies and/or transactions (Hagel & Armstrong, 1998). Another important reason why people belong to virtual communities has been said to be knowledge sharing which can be research collaboration, data or message exchange (Wang, Yu, & Fesenmaier, 2002). Hence, virtual communities have been recognised an important tool of Knowledge Management (KM) (Camison et al., 2009).

Wasko and Faraj (2005) investigated why people share their knowledge with others in electronic networks of practice. They found that both reputation and centrality have significant influences on the helpfulness and volume of knowledge contribution. Knowledge can flow easily when employees view knowledge as a public good belonging to the whole organiza-

*Figure 3. Stages of trust*

tion (Ardichvili et al., 2003). Kollock (1999) suggested that there are four possible reasons why a person is motivated to contribute valuable information or resources to a group. They are:

- The expectation that one will subsequently receive useful help in return;
- The increasing of one's own reputation and status in the group through contributing;
- A sense of efficacy; and
- The feeling of belonging to the group.

Virtual communities are therefore good platforms for knowledge sharing.

### Knowledge Sharing

Lin (2007) defines knowledge sharing as a social interaction culture, involving exchange of employee knowledge, experience and skills. In Davenport and Prusak's (1998) opinion, organisations are like knowledge markets, where buyers (people seeking knowledge), sellers (people with substantial knowledge), and brokers (people making connections between buyers and sellers) engage through some form of communication which results in knowledge sharing. Knowledge sharing has been proved by studies to be of great importance to organisations as it provides them with competitive advantage (Reid, 2003). Other researchers have demonstrated that knowledge sharing enhances innovative performance and reduces redundant learning efforts (Calantone et al., 2002; Scarbrough, 2003); and innovative performance is the principal mechanism for organisational growth and sustainability (Sullivan & Dooley, 2010).

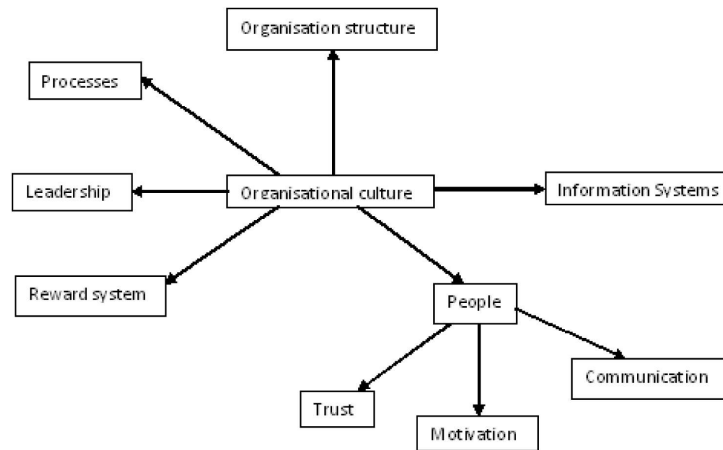
Hooft and Weenen (2004a) indicated that the practice of mutual knowledge exchange between employees result in jointly creating new knowledge and they identified two dimensions of knowledge sharing: knowledge donating (communicating their personal intellectual capital to others) and knowledge collecting (consulting colleagues to encourage them to share their intellectual capital).

### IT PROFESSIONALS IN VIRTUAL COMMUNITIES AND KNOWLEDGE SHARING

In an organisation IT department consists of various personnel whose skills can generally be divided into technical and non-technical skills (Goles, Hawk, & Kaiser, 2008). Hardware, systems and application software, and telecommunications skills are some of the examples of technical skills (Cash, Yoong, & Huff, 2004). Trigo et al. (2010) described non-technical skills generally to include: (a) business skills, such as knowledge of the organization's structure, strategy, processes and culture and the ability to understand the business environment; (b) management skills as planning, leading, organizing and controlling; and (c) soft skills.

Both technical and non-technical professionals can find virtual communities very useful in sharing their experiences, seeking solutions and learning new techniques. Virtual communities formed by professionals are known as professional virtual communities (PVC). Bifulco and Santoro (2005) developed a conceptual framework for professional virtual communities and described them as emerging human-centred new organisational arrangements aimed at le-

Figure 4. Organisational culture dimensions from the work of Gupta and Govindarajan (2000)



veraging knowledge management development, value creation and social welfare.

Companies like SUN, Microsoft and others build virtual communities for staff and customers, where they can post a question, reply to queries, find others' opinions and perform other knowledge sharing activities. The diversity of a virtual community makes it a unique and useful tool for knowledge sharing as its members have different levels of experience and are from different cultures and backgrounds. An answer to a typical question may not be possessed by a friend or colleague in close proximity. On the other hand a virtual community can enable the fetching of the answer from a distant community member who may not even belong to the same organisation as the enquirer.

As implied in the foregoing, virtual communities can provide numerous benefits to IT professionals but only a few are listed here:

- Collaborating in research;
- Developing new ideas;
- Learning new techniques;
- Finding out different opinions about something;
- Finding out new developments; and
- Finding different solutions to a problem.

This study will help IT professionals from different organisations to understand how their organisational culture affects their knowledge sharing activity in virtual communities which often cut across organisational boundaries.

## LEVELS OF TRUST IN AN ORGANISATION

Literature shows that trust exists at different levels of analysis. For example, trust exists within individuals, within groups or organisations and between organisations. Mishra (1996) confirmed that trust exists even at institutional level, for example, the public's trust in their political system. Trust as a factor in an organisation is considered to be very important and much research has been conducted on it (Gupta & Govindarajan, 2000; Park et al., 2004).

In organisations, trust can be noticed in teams, between subordinates and their leaders or managers, between different departments, between external (customers/suppliers) and organisations and between organisations. Zaheer et al. (1998, p. 141) noted that "considerable ambiguity is evident in the literature about the precise role of trust as it operates at different levels of analysis and its influence on performance". To systematically study trust in

an organisation and to simplify its role so that its level in an organisation can be assessed, we have proposed that trust should be based on interactions. Interactions can be internal among members of an organisation or with external entities like suppliers, customers and competitors. Interactions may create a relationship between inter-actionists. On the basis of this main categorisation of interactions in an organisation (internal and external) trust has been divided into internal and external levels (of trust) in this research as shown in Figure 5.

- Internal trust consists of trust between members of organisations. This trust level has different sub levels like trust between subordinates and managers, between managers or between subordinates.
- External trust consists of trust between an organisation and external entities. Some of the sub levels of external trust are trust between customers and organisation, between suppliers and organisation and inter organisational level.

For an organisation trust is operationally defined in terms of the average level of trust among the members of the organisation (Mishra, 1996). In this research organisational trust consists of internal and external trusts which are considered as exhaustive generalisation of the trust levels as seen in existing literature (and to the best of the authors' knowledge). These literature-supported levels, e.g., trust between organisation and members (Gabarro, 1987; Tyler, 1996), are used as subcomponents of internal and external trust. Full literature support of the subcomponents is presented in the sections that follow.

### Internal Trust

Internal trust refers to trust between entities inside the organisation, i.e., an organisation towards its members, members towards their organisation and interpersonal trust (between members. Figure 6 lists a sample of studies related to internal level of trust.

### Interpersonal Level

Interpersonal trust describes trust between co-workers (Ismail et al., 2007) and is recognised as an attribute of organisational culture (Gupta & Govindarajan, 2000). Organisational members almost always depend on the support and cooperation of each other. It is interpersonal level trust that facilitates cooperation among staff members (Pesamaa et al., 2007). Trust at interpersonal level increases social control and facilitates reciprocity and sympathy (Axelrod, 1984). When there is similarity in ideas and thinking, then performing organisational task effectively and efficiently might not be a problem. When interpersonal trust is high between staff they might have good relationship with each other, staff may use their skills and abilities, and might share their knowledge to help themselves. Politis (2003) empirically showed that interpersonal trust is essential for knowledge sharing and collaboration in teams.

Members of virtual communities, having high interpersonal levels of trust in organisations in which they work, might trust other participants of virtual communities making the chances of creating a trusting relationship very high. Participants of virtual communities should cooperate with each other by replying to postings on virtual communities, starting discussion, giving suggestions, providing sources or direction. If an organisation has high interpersonal levels of trust then it should have a positive effect on knowledge sharing in virtual communities. Thus,

Hypothesis 1: A high interpersonal level of trust has a positive relationship with knowledge sharing in virtual communities.

### Between Organisation and Staff

According to Jude Welles (2005), in a survey in 2004 by Rights Management consultants, about thirty five percent (35%) of new managers and executives in industry failed in their jobs because of their inability to build relationships and teamwork with staff. A good relationship



between managers and staff is important for organisations. Trust can play a positive role to create enabling relationships between managers and staff. Thus, Gabarro (1987) emphasized that trust is one of the main characteristics that subordinates want in their leaders; and this is very important because these leaders or managers are the principal representatives of the organisation and through them can members trust the organisation.

If the managers trust their employees there will be less control and monitoring (Costa et al., 2001), the chance of positive reply from employees towards organisation may be high; and the organisation can expect them to use their skills and share their knowledge with each other to perform tasks. Moreover, the chances are high that employees will share their expertise (knowledge) with other colleagues, be committed to the organisation, be loyal to the organisation, and perform extra roles (Tyler, 1996). Iverson, McLeod and Erwin (1996) proved empirically that employee trust is a significant determinant of organisational performance.

To highlight changing organisational work environment, Costa et al. (2001, p. 226) stated that "traditional forms of management have been replaced by more collaborative approaches that emphasize coordination, sharing of responsibilities and the participation of the workers in the decision processes". In this new work environment more and more people work from home or from miles away, so controlling such staff is difficult. Thus, to have a trust relationship in such a situation would be very helpful. In this direction, Child and Guido (2003) found that corporate manager's trust in their foreign entities' performance is positively related to growth in sales and profits.

When an organisation has a high trust level between itself and its staff then the chances are high that members from such an organisation will share their knowledge with other participants in virtual communities which may traverse organisational boundaries. Thus,

**Hypothesis 2:** A high trust relationship between staff and an organisation has a positive

effect on knowledge sharing in virtual communities.

## External Trust

External trust exists between organisation members and external entities like customers, suppliers and other organisations. Figure 7 lists research related to external level of trust.

### *Organisation and Customers*

Businesses are established to earn money. However, competition and customer's knowledge of the market are among some of the factors that make it difficult to gain profit. Customers not only want products but also good services. If a business is only about earning money and ignoring customer satisfaction, very soon such a business will disappear from the market. Thus the best strategy for a business is to have a win-win relationship; profit for the business and satisfaction for customers.

To compete and gain profit, businesses need to build relationships with customers. Trust plays a significant role in achieving this objective (Guenzi, Johnson, & Castaldo, 2009). Customer trust in an organisation is affected by trust in both the staff and organisation branded products (Guenzi et al., 2009). Trust is one of the important drivers of customer retention (Ranaweera & Prabhu, 2003). Gremler et al (2001) specified dimensions of interpersonal bonds: trust, rapport, care and familiarity. They claimed that customer's trust in employees has a positive relationship with WOM (word of mouth) of customers about the organisation.

The outcome of trust relationships between customers and an organisation may not be limited to profit of business or satisfaction of customers but can extend to willingness to share their experience (knowledge) with the organisation. In virtual communities such customers may respond to questions asked, take part or start discussions, give suggestions and perform other knowledge sharing activities. Thus,



Figure 5. Categories of trust

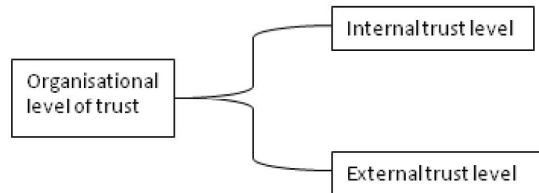
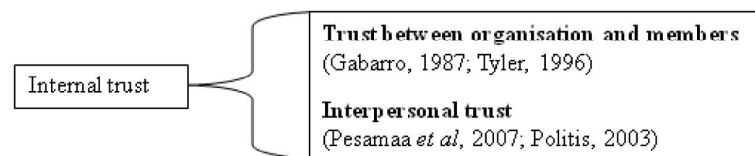


Figure 6. Internal trust



Hypotheses 3: A trust relationship between organisation and customers is positively related to knowledge sharing in virtual communities.

### Inter-Organisational Level

Inter-organisational trust level means trust between two or more organisations some of which may be suppliers, competitors or other types of organisations. Most modern businesses survive on inter-organisational collaborations. A typical organisation often has limited expertise hence the necessity to collaborate with other organisations. Some of the main goals of such collaboration are: to develop new products (Rindleisch & Moorman, 2001), to strengthen supply chains (Wathne & Heide, 2004), to reduce operating costs (Cannon & Homburg, 2001) and to devise industry standards (e.g., the 3G project of Qualcomm, Ericsson, and others). For a successful cooperation between two organisations more than friendship is required. Pesamaa et al. (2007) empirically proved that trust and commitment will initiate cooperation between two businesses. Inter-organisational trust reduces costs and opportunistic behaviours (Selnes & Sallis, 2003). Research has found out that inter-organisational trust increases

performance (Selnes & Sallis, 2003; Zaheer et al., 1998; Smith & Barclay, 1997). If an organisation has a high inter-organisational trust level then its members might trust members of other organisations easily and will help participants to solve their problems, be more open to start discussion, develop more innovative and original solutions, respond to questions posted by members, guide each other and thus they will be sharing their tacit knowledge with each other. Virtual communities often span across different organisations thus inter-organisational trust can be very important. There seems to be a positive connection between knowledge sharing and high inter-organisational trust level. Thus,

Hypothesis 4: Organisation members having high inter-organisational trust level increases knowledge sharing in virtual communities.

## DIMENSIONS OF TRUST

Previous research has shown some similarity in dimensioning the trust concept. Most of these previous studies were context specific. The dimensions specified by Mayer et al. (1995) which are integrity, benevolence and ability or competence are mostly cited by other

researchers and many believe that these are very generalized dimensions of trust. These trust dimensions along with those proposed by other researchers are summarised in Table 1 below (Costa et al., 2001; Sako, 1992; Mayer et al., 1995; McAllister, 1995; Ganesan, 1994).

As indicated on Table 2, these dimensions from earlier research have been mapped into benevolence, knowledgeableness and openness which are the three trust dimensions adopted and used in this research.

## Benevolence

Benevolence means to be kind and helpful. It is the extent to which a party is believed to want to do good for the trusting party, aside from a selfish profit motive (Mayer et al., 2007). It can also imply being forgiven of other's misgivings. Benevolence is a very important dimension of trust both at internal and external levels of trust of an organisation. The role of benevolence at internal level of trust is very clear and we can find many examples where this dimension can play a significant role. In an organisation if a person is kind, other colleagues generally trust that individual. Similarly when a manager is benevolent to her subordinates, they will likely trust her.

Benevolence in external level of trust of an organisation has also a significant role. For example, if customers perceive that an organisation's staffs are kind and helpful then the chances should be very high that customers will trust such an organisation. Similarly, if an organisation staffs are benevolent to

suppliers then a trusting relationship may engender between an organisation and suppliers. Benevolence can create a good relationship at inter-organisational level too.

Benevolence can initiate a feeling of kindness and helpfulness between human and organisational entities. When entities are benevolent to each other there is a high possibility that they will trust each other.

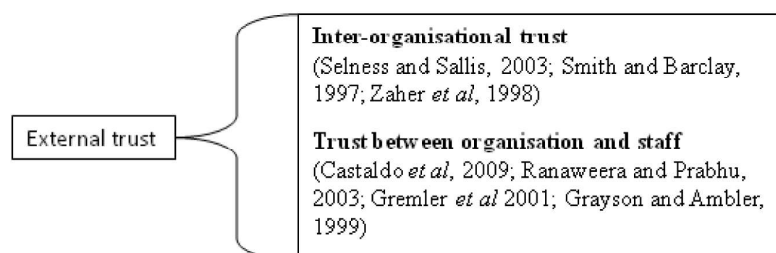
## Knowledgeableness

Knowledge is necessary not only for good performance of tasks but also for earning respect and trust from other employees.

In internal level of trust (interpersonal as well as between staff and organisation) knowledgeableness can create a trusting relationship. Generally in an organisation, staff and managers trust those individuals who know their jobs well; for example, in colleges and universities teachers' knowledge is one of the reasons that their students trust and respect them. Knowledgeableness helps in creating a trusting relationship between parties and this enhances knowledge sharing between colleagues.

Knowledgeableness has roots in the *ability* (competence) dimension of trust which is specified by Mayer et al. (2007). Mayer et al. (2007, p. 346) highlighted the importance of *ability* (competence) in a supplier/buyer relationship. According to them, "if the supplier's ability to deliver is questionable, it will not be trusted". If the external entities of an organisation are able and skilful it may increase the chance for the organisation to trust such an entity.

Figure 7. External trust



The belief that the second party is highly knowledgeable can create de-motivational factors. For example, if we meet a person who is more highly educated than us, we may shy away from quickly expressing our views because we are afraid of making wrong statements. Conversely, a knowledgeable individual may not share his knowledge with others because of fear of risking his job. McClure and Faraj (2000) found that people think of their knowledge as a private asset and a competitive advantage thus some members of an organisation would not share their knowledge with colleagues. However, Ardichivli et al. (2003) found that only a small minority do not share their knowledge because of information hoarding.

### Openness

If a person is knowledgeable and benevolent but is not open in communication, trust would be dampened. Openness, which refers to expressing of thoughts and feelings without restrictions, is very important in both internal and external levels of trust.

In internal level of trust (interpersonal and between staff and organisation) openness helps in creating a trusting relationship. In an organisation, staffs usually trust those colleagues and managers who are honest and fair. If an individual believes that his colleague is unnecessarily hiding information that should be shared then he might not trust that colleague. Staff trusts those managers who are honest in fulfilling their promises.

In external level of trust (between organisation and other external entities), openness is equally important. For example, if a supplier is open (and honest) with an organisation, it may create or increase the trust relationship between the organisation and its suppliers. This will help in sharing useful knowledge between themselves.

Table 2 presents the dimensions of trust specified in this research. The table consists of mainly two parts. On the right, dimensions

from literature are listed and grouped with respect to similarity. On the left dimensions which we specified in this research are listed. The +++ shows strong correspondence between our dimension with those from literature, + represents some correspondence and – means that there is no correspondence. For example, the second line in the Table shows +, +++ and – entries. It means that benevolence has some relationship with integrity, fairness and credibility, +++ means openness has strong relationship and – indicates that it is difficult to find any examples where the relationship between knowledgeableness can be established with those on the right.

### RESEARCH MODEL

The model on Figure 8 consists of dimensions of trust and levels of trust. The three dimensions of trust which are benevolence, openness and knowledgeableness determine the four sub-levels of trust in organisation. The four sub levels of trust are interpersonal, staff and organisations, inter-organisational; and organisation and customers. Each dimension of trust is a component in each of the four levels of trust. The four levels of trust determine the internal and external levels of trust. The model suggests that internal and external levels of trust have positive relationships with knowledge sharing.

### IMPLICATIONS

Even though the research is currently at a conceptual rather than an empirical level, a number of implications can be drawn. Firstly, managers should encourage knowledge sharing by building trust relationships with and among organisation members. Having good trust relationships between managers and staff will not only help in sharing knowledge but will affect on organisation performance as a whole. Good trust relationships will help in securing manager's jobs as Jude Welles (2004) observed

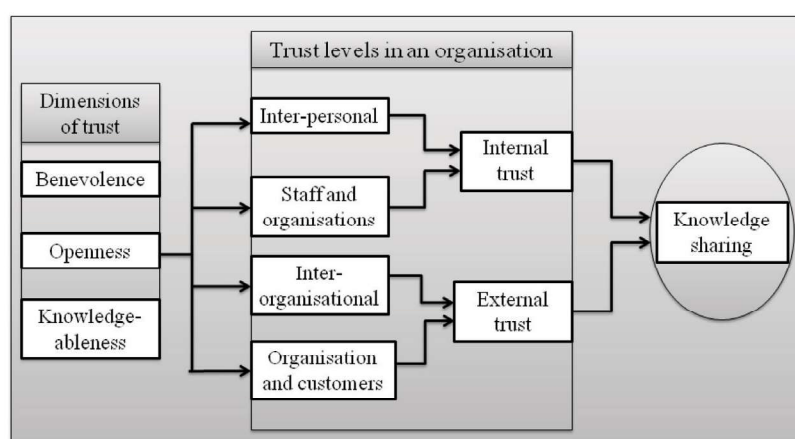
Table 1. Dimensions of trust from previous researches

Dimensions	Authors
1. Faith 2. Confidence	Cook and Wall (1980)
3. Competence 4. Goodwill 5. Fairness 6. Contractual	Sako (1992)
1. Integrity 2. Benevolence 3. Competence or Ability	Mayer et al (1995)
1. Cognitive 2. Affective	McAllister (1995)
1. Credibility 2. Benevolence	Ganesan (1994)

Table 2. Dimensions of trust

Trust dimensions in several studies grouped with respect to similarity				Correspondence with presented dimensions		
Mayer <i>et al</i> , 2007	Sako, 1992	Ganesan, 1994	Cook and Wall, 1980	Benevolence	Openness	Knowledgeableness
Benevolence	Goodwill	Benevolence	Faith	+++	+	–
Integrity	Fairness	Credibility		+	+++	–
Competence	Competence		Confidence	–	–	+++
	Contractual			–	–	–

Figure 8. Research model: trust levels in an organisation and knowledge sharing



that 35% managers failed in their jobs because they failed to build trust relationships with their employees.

Secondly, this research simplifies the role of trust in organisations by dividing the role into internal and external levels; thus contributing to literature that endeavours to clear the ambiguity in the role trust plays in organisations (Zaheer et al., 1998).

Thirdly, with regards to customers, this paper shows the importance of creating and maintaining a trusting relationship. The field of customer relationship management has contributions to managers on how to do this. But suffice to say that organisations should maintain their capabilities, transparency (openness) and dependability to their stakeholders who are more than customers. Especially with the current economic recession, stakeholders' loyalty and support are very important to the existence of organisations.

Fourthly, inter-personal trust should be encouraged within an organisation. This would not develop without personal interactions among staff. So, managers should organise and manage in a way that enables sufficient interactions whether face to face or virtually. The managers themselves should show a good example of being trustworthy and making their subordinates feel trusted.

Fifthly, inter-organisational relationships cannot be avoided in the current age of collaboration often along supply chain lines. Whether the relationships are horizontal or vertical, trust is its lubricant. Managers should ensure that their organisations keep their side of any contracts they have with their partners or suppliers. By positively contributing to the relationship they will be using their capabilities to build and maintain trust.

Finally, the research model will help managers to carry out trust related analysis of the organisation. The research model is simple and defines the different levels and components of trust in an organisation.

## LIMITATIONS AND FUTURE WORK

This paper reports on a part of a study that investigates the effect of organisational culture on knowledge sharing in virtual communities. It focuses on trust as an organisational cultural component. The various dimensioning of trust in literature has been synthesised into benevolence, knowledgeableness and openness. Almost every research has some limitations and this paper is no exception to that.

Trust has been divided into internal and external levels of trust. These two levels have further sub levels of trust in organisation. In this research only a few sub levels of trust have been identified. Research should be conducted to define the more complete list of sublevels of internal and external levels of trust.

This is only a conceptual study and not yet supported by empirical evidence. There is therefore a need for a follow up empirical study that will begin with the operationalization of the theoretical model such that data can be collected and analysed to test the relationships between the constructs of the model. A survey using questionnaire method will be used to gather data that will be analysed to examine the research model.

## REFERENCES

- Ardichivli, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge sharing communities of practice. *Journal of Knowledge Management*, 7(1), 64-77. doi:10.1108/13673270310463626
- Axelrod, R. (1984). *The evolution of cooperation*. New York: Basic Books.
- Barney, J. B., & Hansen, M. H. (1994). Trustworthiness as a source of competitive advantage. *Strategic Management Journal*, 15, 175-190. doi:10.1002/smj.4250150912



- Bhattacharya, R., Devinney, M. T., & Pillutla, M. M. (1998). A formal model of trust based on outcomes. *Academy of Management Review*, 23(3), 459–472. doi:10.2307/259289
- Bifulco, A., & Santoro, R. (2005). A conceptual framework for “professional virtual communities. [IFIP]. *International Federation for Information Processing*, 186, 417–424.
- Bijlsma, K., & Koopman, P. (2003). Introduction: Trust within organisations. *Personnel Review*, 32(5), 543–555. doi:10.1108/00483480310488324
- Brock-Smith, J., & Barclay, D. W. (1997). The Effects of Organizational Differences and Trust on the Effectiveness of Selling Partner Relationships. *Journal of Marketing*, 61, 3–21. doi:10.2307/1252186
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning orientation, firm innovation capability, and firm performance. *Industrial Marketing Management*, 31(6), 515–524. doi:10.1016/S0019-8501(01)00203-6
- Camison, C., Palacios, D., Garrigos, F., & Devece, C. (2009). *Connectivity and knowledge management in virtual organisations*. Hershey, New York: Information Science Reference.
- Cannon, P. J., & Homburg, C. (2001). Buyer–Supplier Relationships and Customer Firm Costs. *Journal of Marketing*, 65, 29–43. doi:10.1509/jmkg.65.1.29.18136
- Casalo, V. L., Flavian, C., & Guinaliu, M. (2008). Fundamentals of trust management in the developments of virtual communities. *Management Research Review*, 31(5), 324–338.
- Cash, E., Yoong, P., & Huff, S. (2004). The impact of E-commerce on the role of IS professionals. *The Data Base for Advances in Information Systems*, 35(3), 50–63.
- Child, J., & Guido, M. (2003). Contextual confidence and active trust development in the Chinese business environment. *Organization Science*, 14(1), 69–80. doi:10.1287/orsc.14.1.69.12813
- Costa, A. C., Roe, R. A., & Taillieu, T. (2001). Trust within teams: The relation with performance effectiveness. *European Journal of Work and Organizational Psychology*, 10(3), 225–244. doi:10.1080/13594320143000654
- Creed, W. E. D., & Miles, R. E. (1996). Trust in organisations, a conceptual framework . In Kramer, R. M., & Tyler, T. R. (Eds.), *Trust in organisations: Frontiers of theory and research* (pp. 16–39). Thousand Oaks, CA: Sage.
- Cummings, L. L., & Bromiley, P. (1996). The organisational trust inventory (OTI): Development and validation . In Kramer, R. M., & Tyler, T. R. (Eds.), *Trust in organisations: Frontiers of theory and research* (pp. 302–330). Thousand Oaks, CA: Sage.
- Davenport, H. T., & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Cambridge, MA: Harvard Business School Press.
- Elliott, R., & Yannopoulou, N. (2007). The nature of trust in brands: A psychological model. *European Journal of Marketing*, 41(9), 988–998. doi:10.1108/03090560710773309
- Goles, T., Hawk, S., & Kaiser, K. M. (2008). Information technology workforce skills: The software and IT services provider perspective. *Information Systems Frontiers*, 10(2), 179–194. doi:10.1007/s10796-008-9072-9
- Gremler, D., Gwinner, K., & Brown, S. (2001). Generating positive word-of-mouth communication through customer-employee relationships. *International Journal of Service Industries Management*, 12(1), 44–59. doi:10.1108/09564230110382763
- Guenzi, P., Johnson, M., & Castaldo, S. (2009). A comprehensive model of customer trust in two retail stores. *Journal of Service Management*, 20(3), 290–316. doi:10.1108/09564230910964408
- Gupta, A. K., & Govindarajan, V. (2000). Knowledge management social dimension: lessons from Nucor Steel. *Sloan Management Review*, 42(1), 71–81.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviours, institutions, and organisations across nations* (2nd ed.). Thousand Oaks, CA: Sage.
- Hsu, M., Ju, T., Yen, C., & Chang, C. (2007). Knowledge sharing behaviour in virtual communities: The relationship between trust, self-efficacy, and outcome expectation. *International Journal of Human-Computer Studies*, 65(2), 153–169. doi:10.1016/j.ijhcs.2006.09.003
- Ismail, A., Nayla, & Yasmeen. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of Knowledge Management*, 11(2), 22–42. doi:10.1108/13673270710738898
- Iverson, D. R., McLeod, S. C., & Erwin, J. P. (1996). The role of employee commitment and trust in service relationships. *Journal of Marketing Intelligence & Planning*, 14(3), 36–44. doi:10.1108/02634509610117348



- Lin, H.-F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of Manpower*, 28(3/4), 315–332. doi:10.1108/01437720710755272
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organisational trust. *Academy of Management Review Journal*, 20(3), 709–734. doi:10.2307/258792
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (2007). An integrative model of organisational trust: Past, Present and Future. *Academy of Management Review Journal*, 32(2), 344–354.
- McAllister, D. J. (1995). Affect- and cognitive-based trust as foundations for interpersonal cooperation in organisations. *Academy of Management Journal*, 38(1), 24–59. doi:10.2307/256727
- McLure, M., & Faraj, S. (2000). It is what one does: why people participate and help others in electronic communities of practice. *The Journal of Strategic Information Systems*, 9(2-3), 55–173.
- Newell, S., Scarborough, H., & Swan, J. (2001). From global knowledge management to internal electronic fences: Contradictory outcomes of intranet development. *British Journal of Management*, 12(2), 97–111. doi:10.1111/1467-8551.00188
- O’Sullivan, D., & Dooley, L. (2010, January). Collaborative innovation for the management of information technology resources. *International Journal of Human Capital and Information Technology Professionals*, 1(1), 16–30.
- Park, H., Ribiere, V., & Schulte, W. D. Jr. (2004). Critical attributes of organisational culture that promote knowledge management technology implementation success. *Journal of Knowledge Management*, 8(3), 106–117. doi:10.1108/13673270410541079
- Pesamaa, O., & Hari, F. J. Jr. (2007). More than friendship is required: An empirical test of cooperative firm strategies. *Management Decision*, 45(3), 602–615. doi:10.1108/00251740710745142
- Politis, J. (2003). The connection between trust and knowledge management: what are its implications for team performance. *Journal of Knowledge Management*, 7(5), 55–66. doi:10.1108/13673270310505386
- Preece, J. (2000). *Online communities: Designing usability, supporting sociability*. New York: John Wiley and Sons.
- Ranaweera, C., & Prabhu, J. (2003). The influence of satisfaction, trust and switching barrier on customer retention in a continuous purchasing setting. *International Journal of Service*, 14(4), 374–395.
- Reid, F. (2003). Creating a knowledge sharing culture among diverse business units. *Employment Relations Today*, 30(3), 43–49. doi:10.1002/ert.10097
- Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, 35, 651–665. doi:10.1111/j.1467-6494.1967.tb01454.x
- Rousseau, M. T., Stikin, S. B., Burt, S. B., & Carmerer, C. (1998). Not so different after all: Across discipline view of trust. *Academy of Management Review*, 23(3), 393–404.
- Sako, M. (1992). *Prices, quality and trust: Inter-firm relations in Britain and Japan*. Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9780511520723
- Scarborough, H. (2003). Knowledge management, HRM and innovation process. *International Journal of Manpower*, 24(5), 501–516. doi:10.1108/01437720310491053
- Selnes, F., & Sallis, J. (2003). Promoting Relationship Learning. *Journal of Marketing*, 67, 80–95. doi:10.1509/jmkg.67.3.80.18656
- Senge, P. (1997). Looking ahead: Implications for the present. *Harvard Business Review*, 30–32.
- Trigo, A., Varajao, J., Soto-Acosta, P., Barroso, J., Molina-Castillo, F., & Gonzalez-Gallego, N. (2010). IT professionals: An Iberian snapshot. *International Journal of Human Capital and Information Technology Professionals*, 1(1), 67–83.
- Tuggle, F. D., & Shaw, N. C. (2000). The effect of organizational culture on the implementation of knowledge management. In *Proceedings of the Florida artificial intelligence research symposium (FLAIRS)*, Orlando, FL.
- Tyler, T. (2003). Trust within organisations. *Personnel Review*, 32(5), 556–568. doi:10.1108/00483480310488333
- Tyler, T., & Degoe, P. (1996). Trust in organisational authorities, the influence of motive attributions on willingness to accept decisions. In Kramer, R. M., & Tyler, T. R. (Eds.), *Trust in organisations: Frontiers of Theory and Research* (pp. 331–357). Thousand Oaks, CA: Sage.

- Usoro, A., & Kuoffie, M. H. S. (2006). Conceptualization of cultural dimensions as a major influence on knowledge-sharing. *International Journal of Knowledge Management*, 2(1), 16–25.
- Usoro, A., & Sharratt, M. (2003). Understanding Knowledge Sharing in online communities of practice. *Electronic Journal of Knowledge Management*, 1(2), 187–196.
- Van Hooff, B., & Weenen, F. D. L. (2004a). Committed to share: commitment and CMC use as antecedents of knowledge sharing. *Knowledge and Process Management*, 11(1), 13–24. doi:10.1002/kpm.187
- Wang, Y., Yu, Q., & Fesenmaier, D. R. (2002). Defining the virtual tourist community: implications for tourism marketing. *Tourism Management*, 23(4), 407–417. doi:10.1016/S0261-5177(01)00093-0
- Wathne, K. H., & Heide, J. B. (2000). Opportunism in Interfirm Relationships: Forms, Outcomes, and Solutions. *Journal of Marketing*, 64(4), 36–51. doi:10.1509/jmkg.64.4.36.18070
- Welles, J. (2005, November 14). *FCW*. Retrieved October 10, 2009, from <http://fcw.com/Articles/2005/11/14/Welles-Trust-in-managers.asp>
- Zaheer, A., Bill, M., & Vincenzo, P. (1998). Does Trust Matter? Exploring the effects of internorganisational & interpersonal trust on performance. *Organization Science*, 9(2), 141–159. doi:10.1287/orsc.9.2.141

*Abel Usoro lectures in the School of Computing, University of the West of Scotland, UK. His current research interest is in information systems which includes knowledge management, e-learning and e-tourism. He has published book chapters, in refereed international conferences and journals (such as International Journal of Information Management, International Journal of Global Information Management and International Journal of Knowledge Management). His academic work has taken him to many countries in Africa, Europe, Asia, North and South America. He is a member of scientific committees of many international conferences and chairs one of them (Conference on Information Technology and Economic Development – [www.uws.ac.uk/cited2010](http://www.uws.ac.uk/cited2010)). He is also a member of the British Computing Society.*

*Imran Ullah Khan is a Doctoral researcher in the School of Computing, University of the West of Scotland, UK. He obtained MSc Computing and Information Systems from Liverpool JMU, PGCert Research methods from UWS and is on the way to achieve PGCert TLHE. His research interests include organizational culture, knowledge management and autonomous systems. His current research work is on knowledge management with particular emphasis on the cultural aspects of knowledge sharing in on-line communities. He has contributed to international conferences and published in international journal.*











# A Dynamic Approach to Introduce Competency Frameworks: Application to the IT & Systems Management Domain

*Alfonso Urquiza Echavarren, Universidad Francisco de Vitoria, Spain*

---

## ABSTRACT

*Although a wide consensus exists about potential business benefits derived from Competency based HR management practices, reality shows that in practice, Competency Management deployment cases are scarce and difficult to implement. This HR business related problem directly affects IT Software industries, both in HRMS applications development and consultancy related services. Market indicators reflect 'unbalance' between potential organizational benefits and actual applications deployment. In this context, defining useful, business-oriented Competency Frameworks has become an important challenge for many organizations willing to progress along through continuous HRM improvement processes. This paper addresses the major issues underlying this Competency Management unbalance. A new business-oriented approach proposing an alternative, scope extended methodology is outlined in this publication, after field validation and wide acceptance from experts in functional HR management and IT Systems professionals from various large size organizations. Therefore, the findings resulting from this research work have both theoretical and practical implications in helping IT management in defining efficient HRMS Competency based applications and deployment strategies.*

**Keywords:** CIO Skills, Competencies, Competency Frameworks, Human Capital Management, Systems Management Model

---

## INTRODUCTION: BACKGROUND AND INTEREST IN COMPETENCY BASED MANAGEMENT

Today's Human Resources (HR) management evolution from a traditional functional support

activity to a process-oriented, business-aligned scenario is shaping the way in which HR professionals work and the scope and architecture of Human Resources Management Systems (HRMS) provided by the Software Industry.

Traditionally, large size organizations focussed primary interest in this area towards Payroll and other basic administrative functions automation. Other required management

DOI: 10.4018/jhcitp.2011010102

activities such as recruitment or training were also performed in a semi or non automated or integrated manner, thus generating relatively large staff departmental units dedicated to HR, not directly linked to main organizational business.

Most recent organizational scenarios produced new efforts focussed to generate efficiency, transforming and automating most HR operations in place in which process flows were handled as 'automated transactions' and self-service tasks directly implicating employees became common, enhancing task-driven routines formerly performed by HR departments.

Within this background scenario, CM business interest appears very much linked to the new Human Capital (HC) paradigm (Blain & Dodd, 1999). Two new dimensions appear. The first is that a new strategic role is expected from HR, linked to what is known as Talent management. The second one is that HR becomes another component within the organization such as IT, Financial Management, Supply Chain Management, Customer Relations Management or any other, all of them driven to produce products or services generating value to the Customer. HC organizational Talent investment value (Cantrel, Benton, Laudal, & Thomas, 2006) needs now to be continuously measured and managed. Two associated facts are shaping the development of the new economy:

- The first is that the Talent market is becoming one of the levers of value determining success in most business markets. Independently of current financial crisis, business markets are generally growing while 'Talent markets', particularly in technology driven organizations, seems to be shrinking, so that Talent is considered a most valuable asset requiring new management approaches in today's organizations. It is in this context where CM practices are viewed as a most valuable HR business approach to *define, measure and manage* these talent assets, the Human Capital of the organization.

- The second one is the growing contribution of Information Technology & Systems to most organizations business results. E-Business process transformation is boosting the development of new management approaches, such as HRMS's.

It is in this comprehensive management context, conditioned by increasing business expectations from managing and developing organization's workforce, where CM becomes the integrating key component in HC Management Systems (Sagi-Vela, 2004) reshaping today's and future E-HRM implementation strategies. Analysts add HR professionals throughout the world have published research initiatives results validating the potential business benefits and performance improvement effects derived from implementing Competency based HR management practices. Probably the most significant starting point in building interest in CM comes from the publication of a most interesting book from (Boyatzis, 1982) in which the Competency orientation effect as a conceptual response to competitive business challenges is identified. CM usually pursues the following goals:

- 1) Support business objectives, providing information to *acquire, maintain, influence, develop and retain* the right employees.
- 2) Align people, processes and technology around shared values.
- 3) Measure the strategic value of Human Capital investments.
- 4) Anticipate human capital changes.
- 5) Learn from industry best practices, leveraging benchmarking data.

The reference guide generated by SEI's People Capability Maturity Model or P-CMM (Curtis, 2001) is another example of trust and confidence in the CM approach. P-CMM is a five level reference model built upon experience in implementing employee's performance continuous improvement practices in a selected number of multinational and large size organizations. The competency-based practices appli-

cation appears in the most significant Process areas of the 3 highest Maturity Levels (Defined, Predictable and Optimizing) within the Model.

The stated market CM 'unbalance' situation between business potential and actual real deployment extend is proven by our research findings, showing that 86% of Spain's largest organizations have interest in deploying improved, comprehensive Competency based management practices, but just 24% of them have put in place long term HRM SW transformation initiatives in place. Management related Competency Framework's research result indicates that the subject is still immature. Theoretical oriented initiatives such as the work presented by (Ravarini, Moro, Tagliavini, & Guimaraes, 2004) are based in statistically collected information from thousands of IT professionals around the globe, but when it comes to practical implementations, although interesting to consider as a starting reference, they do not fit into the specific business context of individual organizations and are difficult to keep updated and business-aligned in dynamic organizational scenarios. Researchers, HR professionals and IT specialists demand new innovative research efforts to try to break through potential barriers and speed up the deployment of new, business aligned CM based initiatives.

Competency Management (CM) is considered by some authors (Sagi-Vela, 2004) as a complementary methodology to other related HR management practices, such as emotional intelligence or very often, Knowledge Management. Most of today's known research initiatives relating Intellectual Capital and technology (Mayo, 2002), (Lindgren, Stenmark, & Ljungberg, 2003), Ward and Aurum (2004) are usually focussed to Knowledge Management (KM), while CM contributions are scarce, directed to specific related aspects as corporate organizational effects (Lindgren, 2005) or Competencies development (Hardless, 2005). Both concepts—KM and CM—are closely related, but the first deals more with the capture, analysis, application and reuse of Knowledge within the organization, with the objective of improving

business processes quality, reducing costs and generating competitive advantage. CM however is mostly focused towards employee life cycle management in the organization. In the field of IT, several efforts are devoted to the importance of CM in this field (e.g., Colomo-Palacios et al., 2010; Ruano-Mayoral et al., 2010; Trigo et al., 2010).

The necessity to suggest new proposals around organizational CM application is evident as indicated by (Grzda, 2004). His research results concludes that a major problem behind the usage of organizational Competency Frameworks is due to the conceptual ambiguity in Competency definitions, due to complex job definitions schemas and formal contradictions in dependant or independent variables definitions used by Competencies.

The identified innovation requirements and wide interest concerning Competency Frameworks definition justifies the efforts in this research, mainly focused to provide guidance in IT strategic decision making for Software application developers and consultancy services. The methodological suggested approach to organizational Competency Frameworks described in following parts of this paper has been successfully validated in various large size organizations, considering both theoretical and practical implications.

## COMMON ASPECTS IN ORGANIZATIONAL COMPETENCY FRAMEWORKS

Competency Frameworks are currently just viewed as a model definition of Competencies, to be used by individuals in HR management processes as maps or indications of behaviour, Knowledge or skills that are valued, recognized and sometimes rewarded by the organization (CIPD, 2008). They may be considered as the language of 'performance' in any organisation.

In most corporate organizational contexts, the objective behind creating a Framework is to identify the generic and activities related Competencies (and associated levels of compli-

ance) that truly have impact in business results (Draganidis & Mentzas, 2006).

The most extended industry methodology relies in creating complex internal Work job analysis aimed at the identification of 'standard' corporate job profiles (Pereda & Berrocal, 2001). Job description includes objectives, evaluation criteria, organizational hierarchy and level of autonomy (Pereda & Berrocal, 2001). Following steps are considered:

1. Process Planning and preparation. Corporate and management implication.
2. Employee's dissemination, seeking active process support from labour workforce.
3. Generic common corporate Competency definition, according to identified mission, values and strategic options.
4. Job profiles definition, from previous job descriptions and required consolidating efforts, each profile is defined in terms of required competencies and performance level, thus finalizing the Competency dictionary.
5. Framework validation, usually in a limited functional segment of corporate organizational scope.

This complex and highly cost process involves too many persons (both internal and external consultants) and has also the disadvantage that in changing market or business scenarios, the picture translated to Competencies may become quickly outdated due to change in corporate priorities towards business response. Apart from previous analysis, it may also be interesting to consider the outcome from CIPD's research concerning most Frameworks, which shows that the following Competencies are always found in most of them:

- Communication skills
- People management
- Team skills
- Customer service skills
- Results-orientation
- Problem-solving.

Other common external type of methodological approach to creating Frameworks relies in working with internal and external expert reviews and statistically based analysis of information (Dawes & Helbig, 2006), (Ravarini et al., 2001). The main problem with these types of approaches relies on people. Many conflicts arise when HR tries to mix internal view and external opinions from collected information, thus aggravating the conceptual ambiguity problem identified in previous chapter.

Mixed combinations of two previous approaches are sometimes considered, as the one proposed by (Yang, Wu, Shu, & Yang, 2006) in its POCCI ('Process Oriented Core Competency Identification') Model. Although results may be satisfactory, the authors recognize that the process is very complex to develop, as well as highly consumer of time and organizational's effort.

## COMPETENCY FRAMEWORKS DIFFERENTIAL ASPECTS

Differences are usually related to the framework content itself. Originally they consisted mainly of behavioural elements (CIPD, 2008) and later on they have become broader and more ambitious in scope, incorporating technical competencies. In some cases (Abel, 2006) they just outline competency definitions but don't include relevant information concerning compliance levels and required employee's activity-based expected behaviour associated to each level. In some scenarios the problem is the opposite, too many detailed content makes associated HR support processes bureaucratic and time consuming, thus generating reluctant employee attitudes affecting efficiency.

Apart from the various aspects identified so far in this paper, we believe that there is also a missing aspect in all known Frameworks which may be essential to succeed in any large scale transformation process such as CM, particularly in large size, technology driven organization: the deployment definition strategy. Having a just a good Competency definition model is not

enough to successfully approach a significant transformation initiative in HR. What is missing is a strategy definition methodology that includes at least:

- Guide to analyze and diagnose current organizational situation (both in HR processes development and System support.
- Definition and evaluation of current organizational technology scenarios.

### **A BUSINESS ALIGNMENT ORIENTED APPROACH: FROM SYSTEMS MANAGEMENT TO COMPETENCY MODEL DEFINITION**

The innovative Competency Model approach suggested in this paper has been produced as a response to many organizations willingness to speed up CM supported transformation processes in a straight, business aligned manner and easy to implement for application in any HR management competency based process such as e-recruitment, e-Learning, Performance management or any other. As in any real business scenario, we have selected a particular functional domain, common and always present in any large size organizations: The IT & Systems management domain. The relevance of this domain relies in the actual fact that Computing and IT related activities are now recognised as one of the most significant forces that are reshaping business development in the new economy (Stiroh, 2000). Far from early predictions that IT management related activities could loose business influence and even easily be externalised (Dearden, 1987), current e-business organizational transformation shows just the opposite effect, particularly in large size organizations (Reich & Nelson, 2003) in which CIO's are required to develop new organizational skills, management competencies and ability to cope with on going technology and IT architecture evolution.

The original idea consists in shaping the Framework from extracted relevant informa-

tion from the particular Business activities Management Model, here the Systems Domain. It has two major advantages compared to other approaches:

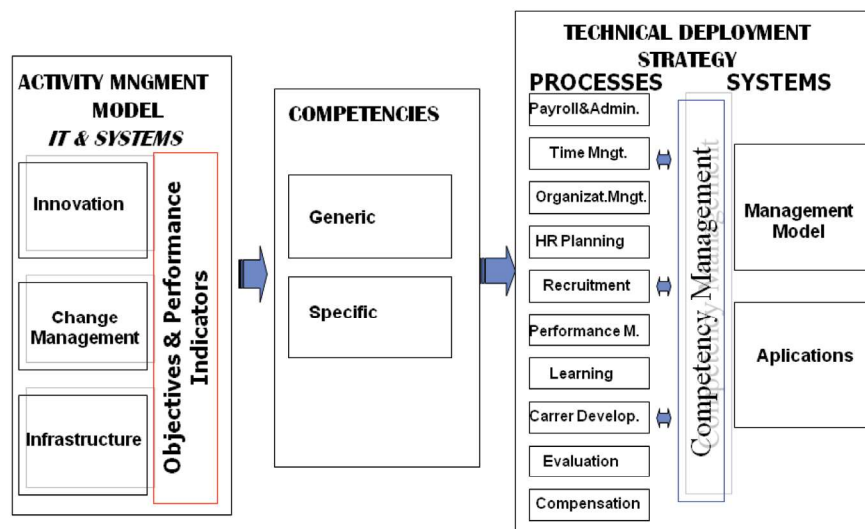
1. All organizational activity domains are managed following simple or complex management models. Even in low maturity developed organizations, managers define priorities, objectives, sometimes assigning performance indicators that are periodically reviewed with employees. It is easier and cheaper to work with existent information then initiating new dedicated HR consultancy projects.
2. Shaping the Framework in accordance to the management model will ensure a permanent alignment between the Competencies defined and the business objectives, which are usually 'incorporated' in the management performance and objectives indicators.

The Framework (as showed in Figure 1) has two major components within its intended scope: the first one is the Competency model definition built following adequate performance business indicators linked to the specific business management model (IT& Systems in our case), rather than using the classical job work assignment's definition analysis and subsequent job profiles required for the organization. The second component is the Implementation Technical Strategy definition, covering both Processes and associated System support applications reengineering strategy, in which the methodological approach has been the following one:

- Building a 'characterization' of all HR business processes, identifying competencies-related activities and process interfaces.
- Current's Processes & System's status analysis
- Identification of HR Business Technology scenarios



Figure 1. Competency framework definition scope proposal for large size organizations



- Evaluation and strategic selection of Organizational preferred scenario

The Activity Management Model for IT & Systems showed above represents the basis of our Framework as a reference guide to match against the particular model (functional, service-oriented, etc) used internally in each organization and it has been structured around 3 macro-processes:

- *Innovation*: it includes all System's activities driven to generate Business advantages from opportunities generated by technology innovation. System's Planning, Applications and Systems Architecture or Business alignment IT relationships are typical innovation related activities.
- *Change Management*: it covers any Customer's development or maintenance support (Business Units as Marketing, Customer Sales or Finances) required applications.
- *Infrastructure Support*: includes all Data Processing Centers operation and management responsibilities, desktop and network service or help desk support.

This macro-processes view of organizational Systems activity is complemented and matched with a 4 views or responsibility levels, thus facilitating a 'visual' representation for employees objectives assignments, in accordance to adequate HR management maturity level, usually in 1-INITIAL or 2\_MANAGED from P-CMM (Curtis, 2001):

The Financial view: measures Business value generated to its customers (internal Business Units) from Systems management. It's the highest level, due to the fact that the 'common language' ensuring alignment between Systems and Business Units requires considering IT products or services as 'technology related assets', in away that there in common understanding to evaluate, determine priorities and decide how and when introduce changes in them.

The Client view: relates to the customer orientation in any Systems management model in place. It should incorporate indicators that are valued by Business Units (quality of IT services, deployment time measures, etc.).

The Process view: used to evaluate whether IT internal processes respond to Business Units service expectations (applications quality, # of maintenance actions in active services, etc.).